Chapter Eight
SYSTEM RECOMMENDATIONS

Chapter Eight
System Recommendations

The previous chapter of the PAG RASP provided a comprehensive assessment of the Regional Aviation System's current performance. This evaluation was completed using performance measures and benchmarks established at the beginning of the RASP. The evaluation and benchmarking of all facets of the airports that serve the RASP Study Area culminated with the issuance of a System report card, which was discussed and presented in the previous chapter of the RASP. Using the information provided by the System report card, the PAG staff and RASP Task Force worked together to set target objectives for the Regional Aviation System's future performance. These target performance objectives are the basis for the final recommendations for the RASP. System recommendations are documented in this chapter.

Benchmark Performance Objectives

Exhibit 8-1 presents the current compliance ratings for all benchmarks used to evaluate System airports, and **Exhibit 8-2** provides information that indicates those airports currently meeting each of the RASP benchmarks.

Capacity

Table 8-1 presents current Capacity performance compliance and target objectives for the RASP System.

Table 8-1
CAPACITY OBJECTIVES

Benchmarks	Current Compliance			Target Compliance		
	Level I	Level II	System	Level I	Level II	System
Under 60% Capacity Current	100%	100%	100%	100%	100%	100%
Under 60% Capacity 2010	100%	100%	100%	100%	100%	100%
Under 60% Capacity 2030	100%	100%	100%	100%	100%	100%
Under 80% Capacity Current	100%	100%	100%	100%	100%	100%
Under 80% Capacity 2010	75%	100%	88%	100%	100%	100%
Under 80% Capacity 2030	75%	100%	88%	100%	100%	100%
No Hangar Waiting List	50%	25%	38%	100%	100%	100%
Meets Auto Parking Needs	50%	75%	63%	100%	75%	88%

Exhibit 8-1
CURRENT SYSTEM COMPLIANCE

	Current Compliance		
	Level I	Level II	System
CAPACITY			
Under 60% Capacity Current	100%	100%	100%
Under 60% Capacity 2010	100%	100%	100%
Under 60% Capacity 2030	100%	100%	100%
Under 80% Capacity Current	100%	100%	100%
Under 80% Capacity 2010	75%	100%	88%
Under 80% Capacity 2030	75%	100%	88%
Impacts of Capacity Constraints (Coverage)	Population = 47%		
Impacts of Capacity Constraints (Coverage)	Employment = 70%		
No Hangar Waiting List	50%	25%	38%
Meets Auto Parking Needs	50%	75%	75%
STANDARDS			
Meets Runway/Taxiway Separation	100%	75%	88%
Meets RSA Guidelines	100%	50%	75%
Meets ADOT PCI Guidelines	75%	50%	63%
No Operational Constraints From Airspace	75%	75%	75%
No Approach Impacts From Obstructions	75%	75%	75%
ECONOMIC SUPPORT			
Seats To Top 10 Markets (1995)	33,239		
Seats To Top 10 Markets (2000)	34,627		
Weekly Departing Seats (1995)	55,605		
Weekly Departing Seats (2000)	56,187		
Average One-Way Fare (1995)	$125.27		
Average One-Way Fare (2000)	$141.64		
Has Part 135 Operator	50%	0%	25%
Has Air Cargo Service	25%	0%	13%
Has 5,000-foot Runway	100%	25%	63%
COMPATIBILITY			
Has Identified Part 77 Surfaces	100%	75%	88%
Plan/Vision Statement	75%	50%	63%
Has Current Master Plan/ALP	75%	50%	63%
Has Current Noise Contour	100%	50%	75%
Has ADOT Airport Influence Map	100%	75%	88%
FINANCIAL RESPONSIBILITY			
Has Full-Time, On-Site Staff	100%	25%	63%
Has Business/Financial Plan	25%	0%	13%
Has Local Financial Support	75%	100%	88%
Has Current Rates/Charges	75%	75%	75%
Has Recent Land Appraisal	75%	50%	63%
Has Operating/Minimum Standards	50%	25%	38%
ACCESSIBILITY			
	Population		Employment
Has 5,000-foot Runway	58%		73%
Has Published Approach	50%		70%
Has Special Use Aviation	8%		3%
Has Public Transportation	47%		70%
Has Intermodal Transfer	47%		70%

Exhibit 8-2
CURRENT BENCHMARK PERFORMANCE
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	Level I				Level II			
PERFORMANCE MEASURE	Tucson International	Ryan Airfield	Marana Northwest Regional	Pinal Airpark	Benson Municipal	Ajo Municipal	Sells	La Cholla Airpark
CAPACITY								
Benchmarks								
Under 60% Capacity Current								
Under 60% Capacity 2010								
Under 60% Capacity 2030								
Under 80% Capacity Current								
Under 80% Capacity 2010								
Under 80% Capacity 2030								
No Hangar Waiting List								
Meets Auto Parking Needs								NA
STANDARDS								
Benchmarks								
Meets Runway/Taxiway Separation					NA	NA	NA	NA
Meets RSA Guidelines								NA
Meets ADOT PCI Guidelines								
No Operational Constraints From Airspace								
No Approach Impacts From Obstructions								
ECONOMIC SUPPORT								
Benchmarks								
Seats To Top Markets (1995)	33,239							
Seats To Top Markets (2000)	34,627							
Weekly Departing Seats (1995)	55,605							
Weekly Departing Seats (2000)	56,187							
Average One-Way Fare (1995)	$125.27							
Average One-Way Fare (2000)	$141.64							
Has Part 135 Operator						–	–	–
Has Air Cargo Service					–	–	–	–
Has 5,000-foot Runway					–	–		–
COMPATIBILITY								
Benchmarks								
Has Identified Part 77 Surfaces								
Included in Comprehensive Plan/Vision Statement								
Has Current Master Plan/ALP								NA
Has Current Noise Contour								
Has ADOT Airport Influence Map								

Noncompliant
Compliant
Planning in Progress
NA Not Applicable
\- Not Required

Exhibit 8-2
CURRENT BENCHMARK PERFORMANCE
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PERFORMANCE MEASURE	Level I				Level II			
	Tucson International	Ryan Airfield	Marana Northwest Regional	Pinal Airpark	Benson Municipal	Ajo Municipal	Sells	La Cholla Airpark
FINANCIAL RESPONSIBILITY								
Benchmarks								
Has Full-Time On-Site Staff							NA	NA
Is Privately Owned								
Has Business/Financial Plan							NA	NA
Has Local Financial Support								
Has Current Rates/Charges								
Has Recent Land Appraisal								NA
Has Operating/Minimum Standards								
ACCESSIBILITY								
Benchmarks								
Has 5,000 foot-Runway					-	-		-
Has Precision Approach					-	-	-	-
Has Special Use Aviation								
Has Public Transportation					-	-	-	-
Has Intermodal Transfer					-	-	-	-

Noncompliant
Compliant
Planning in Progress
NA Not Applicable
\- Not Required

Airfield Capacity

Analysis completed as part of the System evaluation showed that, when all airports are considered, the System of airports serving the RASP Study Area has ample airfield capacity to serve both current and longer-term demand levels, as projected in the RASP. Not all airports in the System are capable, nor should they be, of serving all facets of aviation demand or all aircraft types. There are certain key airports in the System whose projected demand may reach FAA-established trigger levels of demand versus operational capacity.

All Level II airports in the RASP System have more than adequate operating capacity to meet current and long-term demand levels. Since all Level II airports, Ajo Municipal, Benson Municipal, La Cholla Airpark, and Sells, have ample operational capacity to meet both current and long-term operational demand, the RASP contains no capacity-enhancing recommendations for these airports.

The most notable shortfall in operational capacity is expected to occur in Level I airports in the System. According to operational capacity and demand estimates developed as part of the RASP, at least two of the Level I airports, Tucson International and Ryan Airfield, may reach key demand/capacity trigger points between now and 2030. According to the RASP, based on its current operational capacity (ASV) and reported total annual operations, Tucson International's demand/capacity ratio now exceeds

60 percent. RASP analyses indicate that Ryan Airfield might reach the 60 percent demand/capacity ratio between 2010 and 2030. According to the RASP forecast, Marana Northwest Regional should not reach 60 percent demand/capacity ratio prior to 2030. However, Marana's planning committee has developed a more aggressive forecast that shows the airport reaching this critical demand/capacity percentage. Marana Northwest Regional's planning group should determine which forecast to base capacity-improvement projects on, and plan accordingly. FAA guidelines indicate when an airport's annual demand reaches 60 percent of its annual operating capacity, the airport should begin planning for capacity-enhancing projects.

Based on FAA guidelines, PAG and the RASP Task Force concluded that System airports reaching the 60 percent demand/capacity ratio are considered compliant with objectives for the Regional Aviation System if they have taken steps to plan for future capacity-enhancing projects, as represented in Table 8-1 and Exhibit 8-1. In Exhibit 8-2, note that green shading signifies planning is in progress, but the airport is not under the 60 percent or 80 percent objective. Master plans and the ADOT CIP for both Ryan Airfield and Tucson International indicate that these two airports have, as part of their most recent planning efforts, taken steps to identify and plan for projects that will increase their annual operating capacity.

According to objectives established in the RASP, planning should have begun for Tucson International to increase its operational capacity before 2000. Tucson International has met this target for capacity-related planning. Planning studies should begin for Ryan Airfield between 2010 and 2030 in order for the airport to remain in compliance with RASP capacity objectives. Marana Northwest Regional should not reach the 60 percent benchmark by 2030, according to RASP projections. Shortly after 2030, however, Marana Northwest Regional may reach the critical 60 percent demand/capacity threshold; planning for increased operational capacity should be considered at that time. **Table 8-2** summarizes ASV levels for Tucson International, Ryan Airfield, and Marana Northwest Regional.

Table 8-2
ANNUAL OPERATIONAL CAPACITY (ASV)
PLANNING HORIZON

Airport	Demand 2000	Demand 2010	Demand 2030	ASV	% 2000	% 2010	% 2030	Planning Required
Tucson International	250,943	309,214	348,028	380,000	66.04%	81.37%	91.59%	2000
Ryan Airfield	174,461	197,200	243,440	355,000	49.14%	55.55%	68.57%	2010-2030
Marana Northwest Regional	71,300	99,540	134,300	230,000	31.00%	43.28%	58.39%	Post 2030

Annual demand at any airport can exceed 100 percent of that airport's calculated operational capacity, but at this level of demand versus capacity, delays typically become frequent and lengthy. As part of the RASP, an objective was established to have all System airports operating at demand/capacity ratios under 80 percent. Tucson International is the only airport in the System whose demand is expected to utilize more than 80 percent of its current operational capacity at any point over the 30-year planning horizon. To meet RASP objectives, capacity-enhancing projects will be needed at Tucson International prior to the 2010 planning horizon. Additional airfield capacity will be required to keep the airport's demand/capacity ratio under 80 percent past 2020.

Tucson International is in the process of planning for, and implementing, a project that will increase its current operating capacity. This project includes construction of a new air carrier runway 11R/29L to the southwest of the existing general aviation only runway 11R/29L. The existing 11R/29L will revert back to a taxiway when the new 11R/29L runway is completed. The new air carrier runway, Runway 11R/29L, will accommodate air carrier aircraft southwest of Runway 11L/29R. The recommended "close parallel runway" would allow independent use of both runways by air carriers under good weather conditions. The planned project will also include the enhancement of the airport's parallel taxiway system. Tucson International indicates that this project should be completed by 2008; this is prior to the time that the airport is projected to reach the 80 percent demand/capacity ratio. Implementation of this planned project will allow Tucson International to operate below the 80 percent demand/capacity ratio. In order to satisfy Study objectives to have all System airports operating below the 80 percent demand/capacity ratio, the RASP recommends that Tucson International proceed with the implementation of its planned project.

While this nearer-term capacity-enhancing project will allow Tucson International to operate at a demand/capacity ratio of less than 80 percent for a number of years following its estimated project completion in 2007-2008, growing activity at this airport is again expected to push Tucson International to the 80 percent demand/capacity ratio by the end of the RASP's planning period in 2030.

The master plan for Tucson International recognizes that the airport may, in fact, have longer-term shortfalls in operational capacity. To respond to this longer-term need for additional operating capacity, this airport's master plan contains a recommendation for additional parallel runways. In the long term, Tucson International's master plan calls for a parallel runway (5,200 feet x 150 feet), parallel to Runway 11L/29R and east of the airport's existing landside development complex. The actual need for, and timing of, the development of this runway will be based on actual growth in operations at the airport. The development of this additional parallel runway would provide Tucson International with ample operational capacity for the long-term planning horizon.

The following airports should continue planning for capacity-expansion projects and complete them before reaching 80 percent of their annual service volume.

- Ryan Airfield
- Tucson International

According to recent master plans, the following airports are considering capacity-enhancing projects: (Note: "Short Term," Intermediate Term," and "Long Term" represent the time frames 2000-2010, 2011-2020, and 2021-beyond, respectively.):

- Marana Northwest Regional: Construct high speed taxiway exits (Intermediate Term), Construct a parallel Runway 12R/30L (Long Term), Construct full parallel Taxiway D (Long Term)
- Ryan Airfield: Construct parallel Taxiway C (Intermediate Term), Construct high speed exits on Runway 6L/24R (Intermediate Term), Construct high speed exits on Runway 6R/24L (Long Term)
- Tucson International: Construct high speed taxiway exits (Short Term), Construct new Runway 11R/29L and re-designate existing Runway 11R/24L as a taxiway (Long Term)

Landside Capacity

Two landside capacity measures were evaluated in the RASP: hangar storage and auto parking. As part of the RASP, airports in the System were inventoried to identify those airports that currently have hangar waiting lists. It was determined that the current number of aircraft reported on hangar waiting lists for all airports approximately equals the number of un-hangared aircraft in the System.

Facility and service objectives established for the RASP call for Level I airports to provide covered storage for 75 percent of their based aircraft and for Level II airports to provide covered storage for 50 percent of their based fleet. Although hangars are preferred as aircraft storage facilities, the excellent weather conditions in this aviation System allow for the effective use of alternative covered storage units (i.e. shades). The RASP Task Force determined that covered storage could serve as an appropriate substitute for hangars. The ability of Level I and Level II airports to meet this particular facility objective, both now and for each of the forecast milestones, is shown in the following table, **Table 8-3**. This table shows the amount of current storage at each System airport and the total aircraft storage that should be provided in the future based on the RASP forecast. The following formula helps to identify how these numbers were derived, and whether additional covered storage will be needed to make System airports compliant with the objective established for this benchmark:

Ajo Municipal = (2005 Based Aircraft) x (0.5) = Projected Storage Needs
Ajo Municipal = (7) x (0.5) = 3.5 (Round to 4)

Table 8-3
AIRCRAFT STORAGE COMPLIANCE

Level	Airport	Current Storage	Objective Storage 2005	2010	2020	2030
Level I	Tucson International	266	240	240	240	240
	Ryan Airfield	179	206	218	243	269
	Marana Northwest Regional	156	176	189	218	255
	Pinal Airpark	3	44	44	44	44
Level II	Ajo Municipal	5	4	4	6	8
	Benson Municipal	0	8	13	23	33
	La Cholla Airpark	33	50	54	62	70
	Sells	0	1	2	2	3

The RASP also evaluated System airports for their ability to provide adequate general aviation (GA) auto parking. Facility and service objectives established by the RASP call for Level I airports to provide a number of auto parking spaces that is equal to 100 percent of the number of aircraft based at the airport. For Level II airports, the number of auto parking spaces provided should be equal to 75 percent of the airport's number of based aircraft. Although La Cholla Airpark's auto parking was examined, they are not applicable to Study objectives because of their situation as a residential airpark.

Given these objectives, the auto parking needs for PAG RASP airports are shown in **Table 8-4**. This table shows the current parking spaces available at each airport, and the projected auto parking needs based on forecasted based aircraft figures for each airport. The numbers listed under each forecast year represent the total auto parking spaces that should be provided. The following formula provides an example of how these numbers were derived:

Ajo Municipal = (2005 Based Aircraft) x (0.75) = Projected Auto Parking Spaces
Ajo Municipal = (7) x (0.75) = 5.25 (Round to 5)

Table 8-4
AUTO PARKING COMPLIANCE

Level	Airport	Current Auto Parking	Objective Auto Parking 2005	2010	2020	2030
Level I	Tucson International	427	320	320	320	320
	Ryan Airfield	236	274	290	324	358
	Marana Northwest Regional	90	235	252	290	340
	Pinal Airpark	100	58	58	58	58
Level II	Ajo Municipal	20	5	6	9	11
	Benson Municipal	10	11	19	34	49
	La Cholla Airpark	10	75	81	93	105
	Sells	5	2	2	3	4

The following airports should consider landside capacity-enhancing projects:

- Ryan Airfield – Aircraft storage
- Marana Northwest Regional –Aircraft storage, auto parking
- Pinal Airpark – Aircraft storage
- Ajo Municipal – Aircraft storage
- Benson Municipal – Aircraft storage, auto parking
- La Cholla Airpark – Aircraft storage
- Sells – Aircraft Storage

According to recent master plans and the ADOT CIP, the following landside capacity-enhancing projects have been recognized:

- Ajo Municipal: Construct 4,800-square-foot T-hangar facility (Intermediate Term), Construct 225 square yards of auto parking (Intermediate Term)
- Benson Municipal: Construct 10 T-hangar units (Short Term), Expand auto parking area by 1,800 square yards (Intermediate Term)
- Marana Northwest Regional: Construct 40 T-hangar positions (Short Term), Construct 3,500 square yards of auto parking (Short Term)

Standards

The RASP System of airports was also evaluated for its ability to meet or comply with various FAA and ADOT standards. **Table 8-5** shows current and target compliance rates for this performance measure.

Table 8-5
STANDARDS OBJECTIVES

	Current Compliance			Target Compliance		
	Level I	Level II	System	Level I	Level II	System
Benchmarks						
Meets Runway/Taxiway Separation	100%	75%	88%	100%	75%	88%
Meets RSA Guidelines	100%	50%	75%	100%	75%	88%
Meets ADOT PCI Guidelines	75%	50%	63%	100%	100%	100%
No Operational Constraints From Airspace	75%	75%	75%	75%	75%	75%
No Approach Impacts From Obstructions	75%	75%	75%	100%	75%	88%

Runway/Taxiway Separation

Currently, all applicable airports that have runways with parallel taxiways meet the FAA standard for separation between the runway and taxiway centerlines, as dictated by each airport's current airport reference code (ARC). Table 8-5 indicates 75 percent compliance for Level II airports; Ajo Municipal, Benson Municipal, and Sells do not have parallel taxiways and La Cholla Airpark does not meet the runway/taxiway separation standard. Although all airports should strive to meet these standards, La Cholla Airpark is not applicable to the runway/taxiway separation benchmark because it is not recognized in the NPIAS. Table 8-5 also shows that the RASP has established an objective to continue to have all (88 percent) applicable System airports comply with this benchmark. If a System airport moves to a more demanding ARC standard, or if the airport plans a new parallel taxiway, each airport will need to ensure that their development follows the most current FAA design standards for their applicable ARC for the System to continue to be 88 percent compliant with this particular benchmark.

According to the most recent master plans and CIPs that are available for System airports, the following airports are considering taxiway projects:

- Ajo Municipal: Construct Taxiway A4 to Runway End 30 and Taxiway A to Runway End 12 (Short Term), Grade Taxiway B (Short Term), Taxiway A extension (Intermediate Term), Construct Taxiway A5 (Long Term)
- Benson Municipal: Construct 4,000 x 75' Taxiway (Short Term)
- Marana Northwest Regional: Construct 14,200-square-yard asphaltic concrete Taxiway (Short Term), Widen Taxiway C 50' (Intermediate Term)
- Ryan Airfield: Widen/strengthen Taxiway B (Short Term), Extend Taxiway 4 (Short Term), Construct Taxiway E (Short Term), Construct Taxiway C (Intermediate Term), Further taxiway improvements (Long Term)
- Tucson International: Construct high speed exit Taxiway (Short Term), 50' taxiway construction to Customs area (Short Term), Construct Taxiway D3 (Short Term), Construct Taxiway E (Short

Term), Re-designate existing Runway 11R/29L as a taxiway (Long Term), Relocate Taxiway C to provide centerline-to-centerline spacing from new Runway 11R/29L (Long Term)

Runway Safety Areas

As shown in Table 8-5, all Level I airports and 50 percent of Level II airports currently have runway safety areas (RSAs) on their primary runways that are compliant with FAA design and development standards, based on each airport's current ARC classification. La Cholla Airpark is not applicable to this runway safety area objective because it is not identified in the NPIAS. Although Sells is not currently identified in the NPIAS, the RASP suggests they meet all NPIAS requirements for future compliance. The RASP has a target compliance objective to have 88 percent of all airports in the System meet their applicable RSA standard. RSA standards are established based on each airport's individual ARC, as well as the type of approach that is available to the respective airport. To maintain an 88 percent compliance rating for this benchmark, airports in the PAG RASP that plan to extend runways, increase the width of their runways, construct new runways, or upgrade to a more demanding ARC will need to, as part of their individual planning efforts, make sure they continue to comply with RSA requirements.

In order for 88 percent of System airports to meet runway safety area objectives, the following airport should clear obstructions surrounding its runway to provide an adequate RSA.

- Sells

The following airports have projects that could affect runway safety area compliance; these projects are as follows:

- Ajo Municipal: Widening of extending Runway 12/30 (Short Term), Grade/reactivate Runway 5/23 (Short Term), Runway 12/30 extension (Intermediate Term)
- Benson Municipal: Runway extension (Short Term), Widen runway (Intermediate Term)
- Marana Northwest Regional: Runway extension (Short Term), Runway 12R/30L construction (Long Term)
- Ryan Airfield: Widen Runway 6R-24L and Taxiway B (Short Term), Runway 6R/24L extension (Long Term)

Pavement Condition Index Rating

Pavement preservation is essential throughout the System in order to minimize long-term pavement reconstruction costs. The PAG RASP has identified (in accordance with ADOT guidelines) a pavement condition index (PCI) rating of 80 as the required strength measure for the primary runway. This figure has been established by the Arizona Department of Transportation as an acceptable rating for runways. The PAG RASP concluded that 63 percent of System airports have a rating of 80 or greater on their primary runway. As a result of its private ownership, La Cholla Airpark's pavements have not been evaluated or inspected as part of the ADOT pavement management plan. Sells and Pinal Airpark have not been evaluated and are assumed to be below the RASP benchmark.

In order for the airports in the RASP to be compliant with the objective to have all airports (100 percent) maintain the pavement on their primary runways at a PCI rating of 80 or greater, the following airports will require pavement enhancements:

- Pinal Airpark
- La Cholla Airpark
- Sells

For airports in the System to remain compliant with this pavement rating benchmark, it will be important for airports in the System to follow through on projects outlined in ADOT's pavement management plan. To maintain a PCI of 80 or greater on their primary runways, ADOT's pavement management plan indicates that the following projects are needed, as identified in master plans or CIPs:

- Ajo Municipal: Pavement preservation (Short Term, Intermediate, Long Term)
- La Cholla Airpark: Overlay Runway 1/19 (Short Term)
- Marana Northwest Regional: Pavement preservation (Short Term), Runway structural upgrade (Short Term)
- Ryan Airfield: Runway 6R/24L structural upgrade (Short Term), Runway 6L/24R pavement preservation (Short Term)
- Tucson International: Runway seal coating (Short Term)

Airspace

The airspace that includes and surrounds Pima County is complex. This complexity stems not only from the number of civilian airports in geographic proximity to each other, but also from the extensive military airspace that overlaps the airspace of civilian airports. When airports have overlapping airspace, as reflected on the Phoenix Sectional Aeronautical Chart (including airspace throughout Southern Arizona), this does not necessarily imply that the overlap results in a restriction to the airport or its operations.

The RASP evaluation reviewed all System airports to identify those that have overlapping airspace. The results of this evaluation showed that, while several of the System airports do have overlapping airspace, the majority of these overlaps do not restrict operations at these airports. Only two of the RASP airports, Tucson International and Ajo Municipal, have airspace overlaps that result in restrictions to their operations. Both of these restrictions are a result of overlapping military airspace.

As shown in Table 8-5, 75 percent of the Level I airports and 75 percent of the Level II airports operate with no airport restrictions. This results in a systemwide compliance for this benchmark of 75 percent. Because current airspace restrictions are based on military needs, it is considered likely that these airspace restrictions will continue to be a characteristic/condition of the future System. When appropriate, airports with overlapping airspace or several military operations should coordinate planning efforts with the military. Therefore, a higher future compliance rating for this benchmark will not be sought.

Compatible airspace is an important consideration for the future System. As future projects at System airports are planned and implemented, careful planning and coordination with other System airports and the military is critical. Future airport master planning for airports in the PAG RASP should

contain rigorous airspace evaluations. As part of this evaluation and planning process, all prudent recommendations and actions should be taken to prevent or mitigate future airspace operating restrictions.

Obstructions

As shown in Table 8-5, 25 percent of the Level I airports and 25 percent of the Level II airports report obstructions that impact their approach minimums. Marana Northwest Regional (Level I) and La Cholla Airpark (Level II) report obstructions that impact their approaches. The controlling obstruction for Marana Northwest Regional is manmade (Avra Valley Road), and the controlling obstruction for La Cholla is terrain in the vicinity of the airfield.

As shown in Table 8-5, the RASP has set a target objective to have 100 percent of all Level I airports have approaches that are not impacted by obstructions. The RASP objective is to have all manmade obstructions that impact approaches resolved. This results in a target compliance rating of 100 percent for the Level I airports and a target compliance rating of 75 percent for the Level II airports. The RASP acknowledges obstructions impacting approaches that are physical features, and accept that these will continue to be a characteristic/condition of the future System.

In order for the system to be in compliance, the following airport should consider removing obstructions:

- Marana Northwest Regional

The following projects listed in a recent master plan identify the significance of the RASP obstruction objective:

- Marana Northwest Regional: Runway End 21 should be extended to remove the displaced threshold from Runway End 03 (Intermediate Term), Avra Valley Road should be repositioned so it does not obstruct the approach to Runway End 30 at Marana Northwest Regional (Long Term)

Economic Support

Table 8-6 depicts current ratings and target compliance objectives for each of the benchmarks used to evaluate the Economic Support performance measure.

As shown previously in Exhibit 8-1, between 1995 and 2000, the number of average weekly commercial airline seats departing to Tucson's top 10 origination and destination markets increased from 33,239 to 34,627. This represents an increase of 4 percent. Between 1995 and 2000, the total number of weekly airline seats departing to all markets from Tucson International increased from 55,605 to 56,187, an increase of 1 percent.

Table 8-6
ECONOMIC SUPPORT OBJECTIVES

	Current Compliance			Target Compliance		
	Level I	Level II	System	Level I	Level II	System
Benchmarks						
Seats To Top 10 Markets (2000)	34,627					38,350
Weekly Departing Seats (2000)	56,187					59,000
Average One-Way Fare (2000)	$141.64					89%
Has Part 135 Operator	50%	0%	25%	50%	25%	38%
Has Air Cargo Service	25%	0%	13%	25%	0%	13%
Has 5,000-foot Runway	100%	25%	63%	100%	25%	63%

Air Service

Based on growth in enplanements projected for Tucson International, a target objective of increasing the number of total weekly airline seats departing the market by 5 percent has been established. As shown in Table 8-6, if this objective is met, weekly departing seats on the commercial airlines that serve Tucson International would increase from 56,187 to 59,000.

At the same time, an objective to increase the number of weekly seats departing Tucson International to the market's top destinations by 10 percent was established. If this objective is met, weekly seating to top O&D markets would increase from roughly 60 percent of the market's total average weekly seats to 65 percent of that total. The target objective set by the RASP is to have the average number of weekly seats departing Tucson International to its top O&D markets to increase from the current level of 34,627 to 38,350 by 2005 (see Table 8-6).

As shown in Exhibit 8-1 (page 8-3), between 1995 and 2000, the market's average one-way commercial airline fare increased from $125.27 to $141.64. This represents an increase of approximately 13 percent. Over this same time frame, the average one-way commercial airline fare in the U.S. increased by 14 percent. In 1995, the average one-way fare for the Tucson market was 90 percent of the average one-way fare for all markets in the U.S. By 2000, Tucson's average one-way fare actually decreased to 89 percent of the average one-way fare in the U.S. Since it is not reasonable to set a dollar value for a fare objective for this economic support benchmark, an objective of decreasing, or at least maintaining, Tucson International's average one-way fare as a percent of the U.S. total average one-way fare for all domestic markets has been adopted by the RASP. In addition, efforts should be made to make the one-way average commercial airline fare from Tucson more comparable with the average one-way fare from Phoenix. The average one-way fare from Phoenix is $131, compared to the $141 average one-way fare from Tucson.

Part 135 Service

Part 135 operators provide on-demand charter service using general aviation aircraft. As shown in Table 8-6, the System's current rating for meeting the benchmark related to the number of airports that have Part 135 operators is 25 percent. None of the Level II airports currently have a Part 135 operator, and two of the Level I airports, Tucson International and Marana Northwest Regional, have operators who provide Part 135 service. While only 25 percent of the System airports currently meet this benchmark, the geographic coverage provided by the airports that have Part 135 operators is good. (58 percent of the Study Area's population and 75 percent of its employment are within a 30-minute drive of Part 135 service.)

The RASP established an objective (Table 8-6) to have one Level II airport, Benson Municipal, provide Part 135 service. Additional Part 135 service at this airport would increase the geographic coverage for this benchmark and would raise the System from a 25 percent to a 38 percent compliance rating. Demand for Part 135 services, nationally, has grown following the events of September 11. Given this increasing demand, Ryan Airfield is considered the next most likely System airport to attract/support Part 135 operations. Should Ryan Airfield attract a Part 135 operator, the System's rate of compliance for this benchmark would increase to 50 percent; this would be in excess of the target compliance objective of 38 percent for this benchmark. The following airport should acquire a Part 135 operator to operate at the airport:

- Benson Municipal

Air Cargo Service

As indicated in Table 8-6, only one System airport, Tucson International, currently has air cargo service. Despite this fact, the percent of the Region's population and employment within a 30-minute drive time of air cargo service is good. (47 percent of the Study Area's population and 70 percent of its employment are within a 30-minute drive time of air cargo service.) The RASP objective for this benchmark remains at the current compliance rating of 13 percent for the System. Should Marana Northwest Regional become involved in air cargo within the next 10 years, as they intend to, the System will benefit from increased coverage and air cargo service, thus rising above the RASP benchmark.

5,000-Foot Runway

Most high-performance business class general aviation aircraft require a minimum runway length of 5,000 feet. Therefore, the number of System airports meeting this standard was one of the benchmarks used to determine the ability of the System to provide adequate economic support. As shown in Table 8-6, all Level I airports and 25 percent of the Level II airports currently have a primary runway length of 5,000 feet or greater. This results in a current System compliance rating of 63 percent for this benchmark. The Study Task Force determined that the existing level of compliance with this benchmark is adequate. The current System compliance rating, 63 percent, was also adopted as the target compliance rating. As part of their individual master planning efforts, both Ajo Municipal and Benson Municipal have considered longer runways. Ajo Municipal's master plan outlines a 900-foot extension, making Runway 12/30 4,700 feet. In the mid-term, Benson plans to extend its runway to 5,600 feet. The need to extend the runway at

either of these two System airports will be based on the number of future operations performed by aircraft requiring a longer runway length. Should one or both of these System airports extend their runways to 5,000 feet or more, the System would exceed its target objective for this benchmark.

Table 8-6 provides a summary of current and target compliance ratings for all benchmarks considered as part of the Economic Support performance measure.

Compatibility

Next to the lack of adequate funding, the most pressing issue facing airports in the U.S. is encroachment from incompatible land uses that limit airport expansion potential and possibly airport operations. It is important for all airports to be proactive in their efforts to protect themselves and make themselves compatible with their surrounding environs. The Compatibility performance measure identified a series of benchmarks designed to determine how proactive airports in the PAG RASP have been in taking these important steps. **Table 8-7** reflects current ratings and target compliance objectives for these benchmarks.

Table 8-7

	Current Compliance			Target Compliance		
	Level I	Level II	System	Level I	Level II	System
Benchmarks						
Has Identified Part 77 Surfaces	100%	75%	88%	100%	100%	100%
Included in Comprehensive Plan/ Vision Statement	75%	50%	63%	100%	100%	100%
Has Current Master Plan/ALP	75%	50%	63%	100%	75%	88%
Has Current Noise Contour	100%	50%	75%	100%	100%	100%
Has ADOT Airport Influence Map	100%	75%	88%	100%	100%	100%

Part 77

One of the best ways for an airport to protect itself is through the identification of critical FAR Part 77 surfaces. Once these surfaces are identified, distinct actions need to be taken to have municipalities that lie within these surfaces adopt appropriate height zoning. According to information gathered as part of the PAG RASP, 100 percent of the Level I airports and 75 percent of the Level II airports have current Part 77 surfaces. This translates into an 88 percent compliance rating for this benchmark. As shown in Table 8-7, the RASP has established an objective for the System of 100 percent compliance for this benchmark. All Level I airports and Level II airports should have current Part 77 surfaces. Sells is the only System airport without current Part 77 information.

As part of the RASP, an effort was made to determine not only which System airports had identified their Part 77 surfaces, but also which airports had taken steps with their surrounding municipalities to adopt height zoning to make them compliant with Part 77 height restrictions. While this effort yielded some information, it became apparent that System airports are unclear as to which of the municipalities that surround them have actually taken steps to adopt height zoning ordinances that meet Part 77 guidelines.

An objective has been established as part of the PAG RASP for the municipalities that surround each System airport to adopt height zoning based on Part 77. It is a recommendation of the RASP that a follow-on study be conducted. This effort should be designed to achieve the following:

- Update airport-specific Part 77 surfaces, as required.
- Identify the municipalities that lie within the Part 77 surfaces of each System airport.
- Develop a model height zoning ordinance.
- Hold workshops on Part 77 guidelines and implementation.
- Conduct meetings with impacted municipalities to ensure compliance with the Part 77 objectives of the RASP.
- Incorporate ADOT compliance with Airport Influence Area Map and Public Disclosure.

The following airport should identify Part 77 surfaces:

- Sells

Comprehensive Plan

According to the results of the System evaluation, 75 percent of the Level I airports and 50 percent of the Level II airports are currently included or recognized in the comprehensive plan of their governing municipality. A target compliance objective of 100 percent has been established for this RASP benchmark. All System airports should be included/recognized in the comprehensive plan for their governing or surrounding municipality or municipalities. To meet this objective of 100 percent compliance, the following System airports need to be included in their respective local comprehensive plans:

- Pinal Airpark
- La Cholla Airpark
- Sells

Master Plan

As shown in Table 8-7, 75 percent of the Level I airports and 50 percent of the Level II airports have current master plans. A master plan was deemed to be current if it was adopted within the last five years. A target compliance rating for this benchmark of 100 percent for the Level I airports and 75 percent for the Level II airports has been adopted. The System as a whole is currently at a 63 percent compliance rating for this benchmark; these target compliance objectives would raise the System rating to 88 percent. To meet the objective established by the RASP for a current master plan, the following System airports require updated or new master plans and/or ALPs:

- Pinal Airpark
- Sells

Because of its private ownership status, it is not an objective of the RASP for La Cholla Airpark to have a current master plan.

Noise Contour

For airports to adequately protect themselves and to be good neighbors, it is important for airports to identify those areas in their environs that could be subjected to adverse noise impacts. These areas can be identified through the development of noise contours using the FAA-approved Integrated Noise Model (INM). It is worth noting that activity levels for smaller general aviation airports seldom generate noise levels that result in contours that extend beyond the airports' property boundaries. As shown in Table 8-7, 100 percent of the Level I airports and 50 percent of the Level II airports report that they have current noise contours.

For the noise contour benchmark, the RASP adopted a 100 percent target compliance objective. All System airports should have current noise contours. RASP airports needing updated or new noise contours to achieve the 100 percent compliance rating include the following:

- La Cholla Airpark
- Sells

ADOT Airport Influence Area Map

The Arizona Department of Transportation (ADOT), recognizing how important it is to protect the State's aviation resources, passed legislation on the State level that requires public airports in Arizona to develop an Airport Influence Area Map. These maps are based on each airport's noise contour and flight tracks. In addition to developing the maps, airports are required to take steps to make sure that the maps are on file with all municipalities in the impacted area, and the maps need to be available for public review. While 88 percent of the System airports have developed Airport Influence Area Maps, similar to the adoption of height zoning, it is unclear how many impacted municipalities have the Airport Influence Area Maps and have such information available for public review.

Identification of those municipalities that have accepted the Airport Influence Area Maps and assisting non-compliant municipalities in making such exceptions should be included with the aforementioned initiatives recommended for the Part 77 benchmark. As shown in Table 8-7, all Level I airports have developed Airport Influence Area Maps and 75 percent of the Level II airports have developed the ADOT-mandated maps. The only System airport reported without the ADOT Airport Influence Area Map is Sells. Sells should take steps to meet this benchmark in order to meet the RASP objective for 100 percent System compliance for this benchmark.

Table 8-7 presents current compliance ratings and target objectives for the benchmarks associated with the Compatibility performance measure. The following airport should generate an ADOT Airport Influence Area Map:

- Sells

Financial Responsibility

To promote a System of airports that has the ability to meet the Region's long-term aviation needs, it is important for System airports to be financially responsible. While financial solvency is ultimately a product of each airport's expenses in comparison to its revenue/income streams, the benchmarks used for this performance measure were deemed to be proxies for determining those airports within the RASP System that have proactively taken steps to maximize their potential to operate, at a minimum, in a break-even financial position.

Table 8-8 reflects current and target compliance ratings for the benchmarks used to evaluate this performance measure.

Table 8-8
FINANCIAL RESPONSIBILITY OBJECTIVES

	Current Compliance			Target Compliance		
	Level I	Level II	System	Level I	Level II	System
Benchmarks						
Has Full-Time, On-Site Staff	100%	25%	63%	100%	50%	75%
Has Business/Financial Plan	25%	0%	13%	100%	50%	75%
Has Local Financial Support	75%	100%	88%	100%	100%	100%
Has Current Rates/Charges	75%	75%	75%	100%	100%	100%
Has Recent Land Appraisal	75%	50%	63%	100%	50%	75%
Has Operating/Minimum Standards	50%	25%	38%	100%	100%	100%

Staff

One of the benchmarks used for this performance measure was the number of System airports with full-time, on-site staff. Currently, 100 percent of the Level I airports meet this benchmark, and 25 percent of the Level II airports meet this benchmark. This rate of compliance yields a current System compliance rating for this benchmark of 63 percent.

For many smaller, low-activity general aviation airports, management responsibilities are taken on by staff members whose daily activities are split between the airport and other city/municipal functions. For these smaller airports in the System, lack of full-time, on-site staff does not necessarily imply that the airport is not being operated in a financially responsible way; to the contrary, low-level airports may only be able to afford/warrant part-time management staff.

As shown in Table 8-8, the System's target staffing objective is 75 percent; 100 percent of Level I airports and 50 percent of the Level II airports should have full-time, on-site staff. The following airport should have a full-time, on-site staff member working at the airport in order for the System to reach its target objective:

- Benson Municipal

Privately Owned Airports

In some airport systems, private ownership can imply some degree of uncertainty related to the airport's long-term availability. In the RASP System, the only privately owned airport is La Cholla Airpark.

In many airport systems, some (or all) private airports may be "at risk." This risk factor stems from various pressures that privately owned airports often succumb to. These pressures are most often related to financial or land use issues. In some settings, there is intense competition for developable property. As a result, privately owned airports that can be small and unprofitable, can find themselves faced with more lucrative "buyout" options. Many airport systems around the U.S. have "lost" privately owned airports that were at one time part of their "open to the public" airport systems.

As a result of the unique private ownership arrangement for La Cholla Airpark, in which the airport is actually owned and operated by residents of the airport's homeowners association, there is every likelihood that this facility will continue to be a long-term aviation resource in the PAG RASP System. The RASP has no goal or objective to change the ownership status of La Cholla Airpark, nor is there, at this point, a goal or an objective to bring additional privately owned airports into the RASP.

It is recognized that there are privately owned airports in and around Pima County that play a supporting role for the public airport system. These privately owned aviation facilities are generally low-activity airports that support sport aviation and recreational flying. While there is a role for these airports, there is not presently a need or a desire to incorporate these privately owned airports into the official PAG System of airports. Therefore, the percent of the System that has private ownership is expected to remain constant over the planning period.

Business/Financial Plan

Another benchmark used to reflect the System's ability to perform in a financially responsible manner is the presence or absence of a business or financial plan. As shown in Table 8-8, only 25 percent of the Level I airports report that they currently have a business/financial plan. None of the Level II airports currently have such a plan, according to information that the airports provided during the RASP inventory effort. While a business/financial plan does not guarantee financial success or stability, these plans can provide the direction that airports often need to generate revenues that at least equal, and ideally exceed, an airport's operating and maintenance expenses.

For the PAG RASP, a target compliance objective of 100 percent was established for the Level I airports. For the Level II airports, a target compliance rating of 50 percent was established for this benchmark. The only System airport to currently report that it has a business/financial plan is Tucson International. To reach a target compliance objective of 100 percent for the Level I airports and 50 percent for the Level II airports, the following System airports should develop business/financial plans:

- Marana Northwest Regional
- Pinal Airpark
- Ryan Airfield
- Ajo Municipal
- Benson Municipal

Perhaps one of the greatest obstacles to meeting the established criteria for this benchmark relates to funding. The development of "stand-alone" financial/business plans is an item that is typically not eligible for funding from the FAA, even for airports that qualify for Federal grants. To meet this RASP target compliance objective, two options are possible. (1) As Study airports update their master plans, the work programs for these projects should include a business/financial plan. (2) Another potential resource for the development of a business/financial plan is ADOT. Recognizing the importance of a business/financial plan for smaller airports, some states have developed pilot programs to provide such plans for airports in their systems. New York, Rhode Island, and Maine are examples of states that have used their system planning grants from the FAA, in part, to develop business/financial plans for key airports. Both of these alternatives should be explored as a follow-on to the RASP to enable the System to meet the objective established for this benchmark.

Local Financial Contribution

As noted in Table 8-8, 88 percent of the RASP airports now report that their local owner/operator contributes to their operating and maintenance expenses and/or provides the local match necessary to secure ADOT or FAA grants. Table 8-8 shows that the RASP has identified a target compliance objective for this benchmark of 100 percent for both the Level I and the Level II airports. According to information collected as part of the RASP, the only airport in the System that does not presently receive financial support from its local owner is Pinal Airpark. Information provided by this facility in mid-February 2002 indicates the level of county participation in the operation and development of this airport is now under review, with approval expected in the coming months. As a result of ongoing efforts at Pinal Airpark, it is anticipated that the System will be 100 percent compliant with this benchmark in the near term.

The following airport should follow through with its plan to gain financial support from a local entity:

- Pinal Airpark

Rates and Charges

Another way to measure financial responsibility is by identifying those airports in the System that have mechanisms in place to ensure their rates and charges are current. Having current rates and charges helps airports in the System to ensure that they are maximizing their revenue streams. As reflected in Table 8-8, 75 percent of the System airports now report that they have current rates and charges. As part of the RASP, a target compliance objective of 100 percent has been established for this benchmark for all Level I and Level II airports. Currently, 75 percent of the Level I airports and 75 percent of the Level II airports are meeting this particular benchmark.

Airports that should review and update their rates and charges to enable the System to meet the target compliance objectives established for this benchmark are as follows:

- Pinal Airpark
- Sells

Annually, the American Airport and Airline Executives (AAAE) publish information on rates and charges for member airports. At a minimum, System airports can review the information in this publication to compare the reasonableness of their existing rates and charges. Again, as RASP airports update their individual planning documents, a review of rates and charges should be incorporated in any financial analysis completed within the context of an airport master plan.

Land Appraisals

To determine if an airport is maximizing its revenue streams, it is important for them to determine if non-aviation properties are developed to their highest and best use. To this end, it is important for System airports to have land appraisals that provide them with up-to-date information on the value of their property that is in excess of aviation or aeronautical needs. Professional land appraisals or evaluations are the best mechanisms for airports that lack this type of information to obtain this type of data.

According to RASP inventory data and analysis completed in the prior chapter, 75 percent of the Level I airports and 50 percent of the Level II airports have had recent land appraisals. This results in a compliance system rating for this benchmark of 63 percent. Target compliance ratings established for this benchmark call for 100 percent of the Level I airports and 50 percent of the Level II airports to meet this benchmark. This would yield an overall target compliance rating for this benchmark of 75 percent, as compared to the current System compliance rating of 63 percent. To meet the target compliance objectives for this benchmark, the following airport needs to have updated/current land appraisals that provide real-time information on the current value of its property:

- Pinal Airpark

As with several of the other benchmarks discussed in association with the Financial Responsibility performance measure, if airports are lacking current information on the value of their property, an airport master plan provides one mechanism for obtaining such information. Hiring an appraiser provides another and more expeditious option for obtaining the information needed for airports to comply with this benchmark.

Minimum Standards

The final benchmark reviewed for this performance measure considered the number of System airports that have developed and adopted minimum operating and development standards. The RASP determined that having such standards is essential to maintaining an airport that is performing in a financially responsible manner. The target compliance objective for this benchmark is 100 percent for all System airports (see Table 8-8).

As shown in Table 8-8, 50 percent of the Level I airports and 25 percent of the Level II airports now meet this benchmark. With current System compliance at 38 percent and a target compliance rating of 100 percent for the System, the following airports are in need of minimum operating/development standards:

- Marana Northwest Regional
- Pinal Airpark

- Ajo Municipal
- Benson Municipal
- Sells

Even for Federally eligible airports, the development of minimum development/operating standards is typically not considered fundable by the FAA. Development of these types of guidelines can sometimes, however, be incorporated into an FAA-funded master plan. ADOT is another resource that System airports can look to for examples of minimum development/operating standards.

Table 8-8 shows current and target compliance ratings for all benchmarks used to evaluate RASP airports for their ability to meet the Financial Responsibility performance measure.

Accessibility

As part of the System evaluation completed in the last phase of the PAG RASP, GIS analysis was used to determine the System's current accessibility, as measured by its proximity to the population and employment centers in Pima County. **Table 8-9** presents the current System compliance ratings for each of the benchmarks used for this performance measure.

Table 8-9
ACCESSIBILITY OBJECTIVES

	Current System Compliance		Target System Compliance	
	Population	Employment	Population	Employment
Benchmarks				
Has 5,000-foot Runway	58%	73%	58%	73%
Has Published Approach	50%	70%	58%	73%
Has Special-Use Aviation	8%	3%	8%	3%
Has Public Transportation	47%	70%	50%	75%
Has Intermodal Transfer	47%	70%	47%	70%

5,000-Foot Runway

As shown in Table 8-9, 58 percent of Pima County's population and 73 percent of its employment are currently within a 30-minute drive time of a System airport with a runway length of 5,000 feet or greater. This type of runway length is generally considered the minimum required for an airport to be able to accommodate a full range of business category general aviation aircraft. Presently, all Level I airports have runway lengths that meet or exceed the 5,000-foot standard, and one Level II airport, Sells, has a runway length of 5,000 feet or greater.

The RASP concluded that the level of coverage provided to the Study Area by airports that now have runways that meet or exceed the 5,000-foot standard is adequate. It is worth noting that master plans for both Ajo Municipal and Benson Municipal contain long-term plans for runway extensions that could result in runway lengths at, or near, the 5,000-foot standard. While these runway extensions are not

considered necessary from a System perspective to meet the Region's transportation and economic needs, they would provide some additional regional coverage, thereby increasing the System's performance as it relates to this particular benchmark.

Published Approach

As shown in Table 8-9, 50 percent of the population and 70 percent of the employment in Pima County are currently within a 30-minute drive time of System airport that has a published approach. Facility and service objectives established by the RASP for Level I and Level II airports call for all airports in Level I to have some type of published instrument approach, either precision or non-precision. The RASP recommends that the following airports should have, at a minimum, a non-precision approach:

- Pinal Airpark
- Marana Northwest Regional

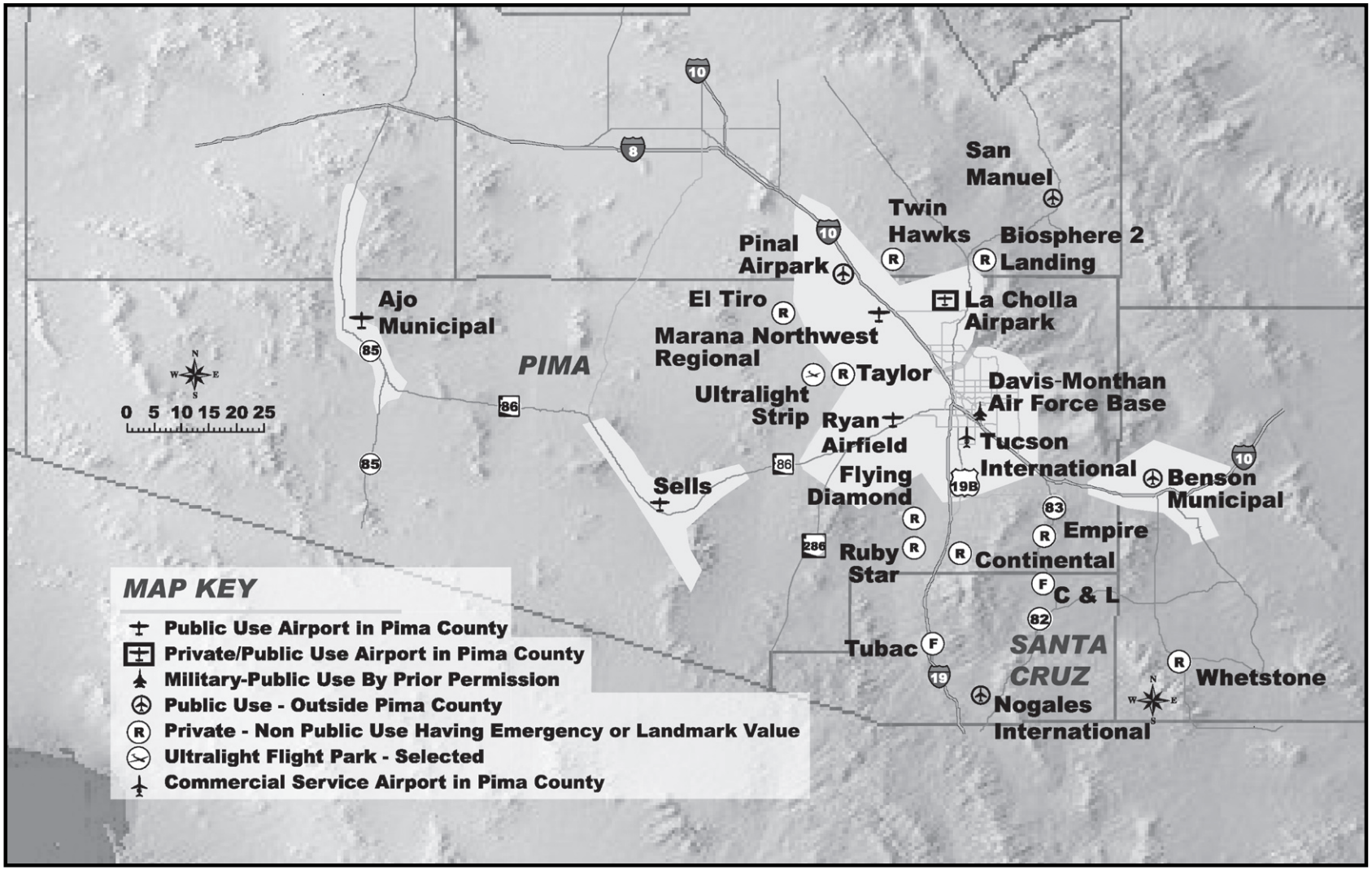
With the development of approaches to these airports, population coverage for this benchmark would increase from its current level of 50 percent to 58 percent and employment coverage would increase from 70 to 73 percent. These are the target compliance objectives that have been adopted for use in the PAG RASP for this performance measure. (See Table 8-9.)

Special-Use Aviation

Special-use aviation consists of operations performed by gliders, sailplanes, ultralights, balloons, and skydiving. Currently, only two of the RASP airports reportedly accommodate these types of special-use activities. These two airports are Marana Northwest Regional (Level I) and Benson Municipal (Level II). In establishing target compliance objectives for the RASP, it was determined that special-use aviation activities at the Level I airports should be discouraged. These airports should be designed primarily to accommodate more sophisticated corporate and business use general aviation aircraft. Special-use aviation activities are considered incompatible at Level I airports.

As shown in Table 8-9, relatively small percentages of the Region's population and employment, 8 percent and 3 percent, respectively, are within a 30-minute drive time of a System airport that accommodates special-use aviation activities. While the RASP has established an objective to limit special-use aviation activities at the Level I airports in the System, there is nevertheless a recognized need within the RASP for airports to accommodate special-use general aviation activities.

In addition to the eight airports examined in the RASP, there are other privately owned airports in Pima County. **Exhibit 8-3** shows the location of these privately owned, restricted-use facilities. These airports are located in less populated and developed portions of the Study Area, as defined by the Phoenix Sectional Aeronautical Chart. Airports that accommodate special-use aviation activities, by the very nature of these activities, do not need to be in proximity to population and employment centers. Shifting experimental aircraft use from Level I airports to private facilities has proven to be successful in the past. Recently, the Tucson Soaring Club, a group of sailplane pilots, moved from Ryan Airfield to El Tiro Airport and leases land from the Bureau of Land Management (BLM).



PAG RASP UPDATE	PIMA COUNTY AND SURROUNDING AIRPORTS	EXHIBIT 8-3

Even if special-use aviation activities are not accommodated at Marana Northwest Regional in the future, RASP analysis has determined that the Level II airports and the supporting privately owned airports in Pima County are sufficient to meet the target objectives for this benchmark. The RASP Level II airports, when supported by the privately owned airports in and around Pima County, provide sufficient accessibility to maintain the current coverage for this benchmark. Maintaining a similar level of coverage has been established as the target compliance objective for this Study benchmark.

Public Transportation

As shown in Table 8-9, the population and employment coverage provided by System airports currently served by public transportation and intermodal transfer facilities is the same, 47 percent for population and 70 percent for employment. The only System airport currently accessible by, or providing, these types of services is Tucson International. In establishing target compliance objectives for the RASP, an objective was set to have one additional System airport accessible by public transportation. Work completed earlier in the RASP indicated that Marana Northwest Regional is the System airport that appears best positioned to obtain such service in the future.

Assuming that Marana Northwest Regional is accessible via public transportation, the percentage of the Pima County's population and employment within a 30-minute drive time of a RASP airport would increase. There is a possibility that Ryan Airfield, Ajo Municipal, and Sells could become stops of the Pima County Rural Transit System, but for this Study, benchmark ratings will not include this possibility. The RASP has established a target increase in population and employment coverage for the future compliance rating for this benchmark. (See Table 8-9.)

The following airport should be accessible by public transportation to provide the System with its objective employment and population coverage:

- Marana Northwest Regional

Air Cargo

Tucson International is the only System airport that has air cargo service. Marana Northwest Regional hopes to enter the air cargo market in the planning period, but the RASP determined that air cargo service will likely remain unchanged throughout the forecast period. Consequently, the target compliance objective for this benchmark remains unchanged. Table 8-9 presents current ratings and target compliance objectives for all benchmarks associated with the Accessibility performance measure.

Facility and Service Objectives

A variety of actions and recommendations are needed over the planning period to enable airports in the System to meet target compliance objectives established in the RASP. These recommendations have been discussed in the preceding sections of this chapter. In addition to these recommendations, facility and service objectives have been established as part of the planning process. These facility and service objectives for Level I and Level II have been set to enable System airports to fulfill their System roles.

The following sections of this chapter identify those facilities and services deemed desirable at RASP airports in order for them to fulfill their assigned System roles. It is worth noting that, in many instances, System airports have identified similar facility and service needs as part of their individual airport master plans and are proceeding to address many of the facility and service-related needs identified in the RASP.

Airside Facilities

Aircraft Design Group

Airside facilities play the most significant role in attracting aircraft to an airport. Airside facility objectives described below include compliance with the following: Aircraft Design Group, runway length, runway width, taxiway, approach, lighting, visual aids, and weather reporting.

The size, weight, and type of aircraft (critical design aircraft) that use an airport are reliant on a variety of airside facility factors. The critical design aircraft is determined by the largest plane accounting for 500 or more annual takeoffs and landings (500 total operations). The Airport Reference Code (ARC) is a coding system developed by the FAA that is used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at an airport. The first component of the ARC, depicted by a letter, is the aircraft approach category. This component is dependent upon the aircraft approach speed. The different aircraft approach speed categories are as follows:

- Category A: Speed less than 91 knots
- Category B: Speed greater than or equal to 91 knots, but less than 121 knots
- Category C: Speed greater than or equal to 121 knots, but less than 141 knots
- Category D: Speed greater than or equal to 141 knots, but less than 166 knots
- Category E: Speed greater than or equal to 166 knots

The second component of the ARC, depicted by a Roman numeral, is the airplane design group. This component is based on the wingspan of an airplane. The airplane design group categories are as follows:

- Design Group I: Wingspan less than 49 feet
- Design Group II: Wingspan greater than or equal to 49 feet, but less than 79 feet
- Design Group III: Wingspan greater than or equal to 79 feet, but less than 118 feet
- Design Group IV: Wingspan greater than or equal to 118 feet, but less than 171 feet
- Design Group V: Wingspan greater than or equal to 171 feet, but less than 214 feet
- Design Group VI: Wingspan greater than or equal to 214 feet, but less than 262 feet

Generally, aircraft approach speed applies to runways and runway-related facilities. Airplane wingspan primarily relates to separation criteria involving taxiways and taxilanes.

The PAG RASP established objectives for all Level I airports to meet Category C and for all Level II airports to meet Category A and B guidelines. **Table 8-10** illustrates that Ryan Airfield is the only System airport that does not meet this facility objective, but Ryan Airfield's master plan lays out a specific action plan to move Ryan up to the C category. Their current Airport Reference Code, B-II, does not meet the Level I objective to serve Category C. Currently, 75 percent of Level I airports and 100 percent of Level II airports meet RASP objectives for their ARC, as shown in **Table 8-11**.

To reach the System's goal of 100 percent of Level I and Level II airports in compliance with their respective aircraft design groups, the following airport should consider projects that enable Category C aircraft to use the facility:

- Ryan Airfield

It is worth noting that Ryan Airfield intends on installing Jet A fuel in the near term; this may attract larger jet general aviation aircraft that currently do not make full use of the airport, justifying the need for this airport to meet Airport Reference Code Category C standards.

Table 8-10
AIRSIDE FACILITY ANALYSIS

Noncompliant / Compliant / Planning in Progress / NA Not Applicable / - Not Required	Level I				Level II			
PERFORMANCE MEASURE	Tucson International	Ryan Airfield	Marana Northwest Regional	Pinal Airpark	Benson Municipal	Ajo Municipal	Sells	La Cholla Airpark
Airside Facilities								
Benchmarks								
Aircraft Design Group								
Runway Length								
Runway Width								
Taxiway								
Precision/Non-Precision Approach					-	-	-	-
Visual Approach								
Lighting								
Visual Aids								
Weather						-	-	-

Runway Length

The minimum primary runway length for Level I airports based on facility objectives, is 5,000 feet. This length allows a diverse group of single-engine, multi-engine, and jet general aviation aircraft to utilize the airports. As shown in Table 8-11, 100 percent Level I airports meet this objective. Each of four airports in Level II has an existing runway length above the RASP objective length of 3,500 feet. (See Table 8-10.)

Runway Width

The Level I runway width objective is 100 feet. Ryan Airfield is the only Level I airport whose primary runway does not meet this facility objective. Ryan Airfield's primary runway would need to be widened from 75 feet to 100 feet in order to be compliant with the facility objectives set by the PAG RASP.

Table 8-11
AIRSIDE FACILITY SUMMARY

PERFORMANCE MEASURE	Current Compliance		
	Level I	Level II	System
Airside Facilities			
Benchmarks			
Aircraft Design Group	75%	100%	88%
Runway Length	100%	100%	100%
Runway Width	75%	50%	63%
Taxiway	100%	25%	63%
Precision/Non-Precision Approach	50%	-	50%
Visual Approach	100%	100%	100%
Lighting	50%	25%	38%
Visual Aids	75%	50%	63%
Weather	75%	-	75%

For Level II airports, Ajo Municipal and Benson Municipal both satisfy the 60-foot width requirement for their primary runways. La Cholla Airpark and Sells each have existing primary runways, 45 feet and 48 feet, respectively, that are too narrow to meet this facility objective for Level II airports. (See Table 8-10.) Table 8-11 illustrates that 75 percent of Level I airports and 50 percent of Level II airports are now compliant with the runway width objective.

For the runway width objective, the RASP adopted a 100 percent target compliance rating. All Level I airports should have runway widths equal to, or greater than, 100 feet and all Level II airports should have runway widths of at least 60 feet. To achieve 100 percent compliance, the following airports would need projects that increase the width of their primary runway:

- Ryan Airfield
- La Cholla Airpark
- Sells

The following project has been identified in the ADOT CIP in coordination with RASP objectives:

- Ryan Airfield: Widen Runway 6R/24L (Short Term)

Recognizing the unique nature of La Cholla Airpark, it is considered unlikely and unnecessary for the airport to meet the runway width objective for Level II airports.

Taxiway

The fourth airside facility objective set by the PAG RASP indicates that all Level I airports should ideally have a full parallel taxiway. Level II airports should have, at a minimum, a taxiway turnaround. All Level I airports satisfy this facility objective. La Cholla Airpark is the only Level II meeting the taxiway support objective with their parallel taxiway. Ajo Municipal, Benson Municipal and Sells do not have existing

taxiway systems or turnarounds. (See Table 8-10.) Therefore, 63 percent of the System complies with the taxiway facility objective, as presented in Table 8-11.

For the entire System to be compliant with taxiway facility objectives, the following airports would require taxiway upgrades or projects:

- Ajo Municipal
- Benson Municipal
- Sells

The following taxiway enhancement projects have been identified in master plans:

- Ajo Municipal: Construct Taxiway A from existing apron to Runway End 12 (Short Term)
- Benson Municipal: Construct a parallel taxiway (Short Term)

Although Ajo Municipal's master plan indicates this project is slated for the short term, it is doubtful that the project will begin in the short or intermediate term.

Published Approach

Level I airports should also be supported by a published approach to comply with airside facility objectives. Fifty (50) percent of Level I airports, Tucson International and Ryan Airfield, have published approaches; Marana Northwest Regional and Pinal Airpark do not have published approaches at this time. It is notable that Pinal Airpark had a published approach in 1990 and 1991, but according to current United States Government Flight Information Publications (U.S. Terminal Procedures: Southwest, Volume 1 and 2), Pinal Airpark's approach is not currently registered. RASP facility objectives call for Level II airports to only be supported by a visual approach. Tables 8-10 and 8-11 separate instrument approach compatibility and visual approach compatibility as two separate line items. Level II airports are visual airports, and are therefore not applicable for the published approach category.

Table 8-11 identifies that 50 percent of Level I airports and 100 percent Level II airports meet the approach benchmark. The following airports should have a published approach in order for the System to be in compliance with this objective:

- Marana Northwest Regional
- Pinal Airpark

The following project was identified in a master plan with regards to a published approach:

- Marana Northwest Regional: Establish a GPS approach (Short Term)

Lighting

Table 8-11 identifies that 38 percent of System airports meet the airside facility lighting objective. Level I airports should have high intensity runway lighting (HIRL) or medium intensity runway lighting (MIRL)

with medium intensity taxiway lighting (MITL). Level II airports should have MIRL or low intensity runway lighting (LIRL) combined with MITL, or reflectors. Of the eight System airports, Sells is the only airport without runway lighting. Benson Municipal is the only Level II airport with MIRLs; Ajo Municipal and La Cholla both have LITLs, but have no MITLs or reflectors on their taxiways. Table 8-10 shows that three Level II airports are not in compliance with this facility objective. Pinal Airpark has MIRL and taxiway reflectors and Ryan Airfield has MIRL; neither comply with Level I lighting objectives.

The following airports would need upgraded runway and/or taxiway lighting for the System to be 100 percent compliant with this objective:

- Pinal Airpark
- Ryan Airfield
- Ajo Municipal
- La Cholla Airpark
- Sells

The following lighting projects have been identified in planning documents:

- Ajo Municipal: Install MIRL to Runway 12/30 (Intermediate Term)
- Marana Northwest Regional: Install HITL/MITL on Taxiway B (Short Term)
- Ryan Airfield: Install MITL/HITL on Taxiway B (Short Term), Install MITL on Runway 6L/24R (Short Term), Install MITL on Taxiway C (Long Term)

Visual Aids

Several landing aids must be available in order for an airport to comply with the visual aids objective, as defined by the RASP. Level I airports should have: rotating beacon, lighted wind cone/segmented circle, REILS, and VGSI (VASIs/PAPIs). Although Tucson International does not have a segmented circle, it is considered compliant with this objective, as are Marana Northwest Regional and Ryan Airfield. Pinal Airpark does not have REILs, PAPIs or VASIs on the airfield. La Cholla Airpark and Sells do not meet the visual aids objectives for Level II airports, as shown in Table 8-10. To meet the visual aid objectives, these should have the following: a lighted wind cone, segmented circle, and rotating beacon.

The following airports would need to upgrade their current airside lighting and visual aids facilities, in order to meet 100 percent System compliance. Pinal Airpark should have REILs, PAPIs or VASIs. La Cholla Airpark lacks a beacon, and Sells does not currently have a beacon, a segmented circle, or a lighted wind cone. The following airports should provide the aforementioned visual aids:

- Pinal Airpark
- La Cholla Airpark
- Sells

Weather Reporting

For Level I airports only, an objective was established by the RASP for a weather-reporting system, either ASOS or AWOS. Pinal Airpark is the only Level I airport that does not meet this requirement. It is not an objective for Level II airports to have on-site weather-reporting capabilities, partially due to the consistently good weather in southern Arizona, which provides excellent visibility from the air. As a result, the following airport should have a weather-reporting system:

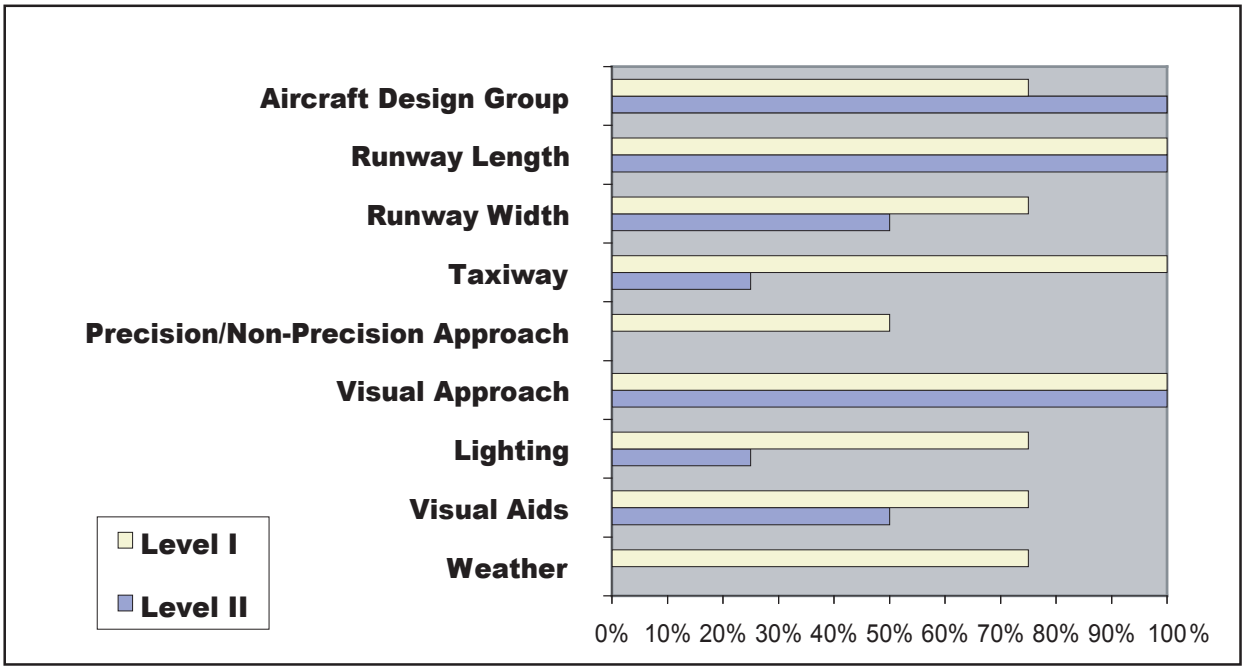
- Pinal Airpark

In order for the System to achieve 100 percent compliance with the airside facility objectives, a variety of projects would be needed. Below is a list of current projects listed in master plans or ADOT's five-year transportation facilities construction program that will help the System comply with the RASP, based on airside facility objectives:

- Ajo Municipal: Partial parallel taxiway construction, Install MIRL
- Benson Municipal: Parallel taxiway construction
- Marana Northwest Regional: Establish GPS approach
- Ryan Airfield: Runway widening project, MITL installation

Exhibit 8-4 summarizes Level I and Level II airside facility compliance.

Exhibit 8-4
LEVEL I / LEVEL II
Airside Facility Compliance



Landside Facilities

Landside facilities support local and transient airport users, pilots, and visitors. Level I and Level II airport landside facilities objectives identified in the RASP include: hangars, apron, terminal/administration building, operations/maintenance hangar, and auto parking. **Table 8-12** outlines current landside facility compliance for System airports. **Table 8-13** summarizes System compliance for each facility objective.

Table 8-12
LANDSIDE FACILITY ANALYSIS

Noncompliant Compliant Planning in Progress NA Not Applicable - Not Required	Level I				Level II			
PERFORMANCE MEASURE	Tucson International	Ryan Airfield	Marana Northwest Regional	Pinal Airpark	Benson Municipal	Ajo Municipal	Sells	La Cholla Airpark
Landside Facilities								
Benchmarks								
Hangar Storage								NA
Apron								NA
Terminal/Administration								NA
Operations/Maintenance Hangar							-	-
Auto Parking								NA

Table 8-13
LANDSIDE FACILITY SUMMARY

	Current Compliance		
PERFORMANCE MEASURE	Level I	Level II	System
Landside Facilities			
Benchmarks			
Hangar Storage	25%	67%	43%
Apron	100%	67%	86%
Terminal/Administration	75%	0%	43%
Operations/Maintenance Hangar	100%	-	100%
Auto Parking	50%	100%	71%

Hangar Storage

Currently, Tucson International, Ajo Municipal, and Sells are the only airports compliant with the RASP hangar/covered storage objective. Level I airports should have hangars/covered storage to accommodate 75 percent of their based aircraft. Ryan Airfield has current hangars/covered storage for 179 aircraft (Table 8-3), making them 13 spaces short of their current need. Marana Northwest Regional can store 156 aircraft, eight short of the objective. Pinal Airpark is 41 storage units short of meeting this storage objective.

Level II airports should have covered storage available for 50 percent of their based aircraft. Due to southern Arizona's weather patterns, enclosed hangars are not a necessity for Level II airports. Sells does not currently have any hangars or based aircraft, technically making it compliant with this facility objective. Benson Municipal has zero storage units, making it three short of this objective. La Cholla Airpark reports 33 hangars and 92 based aircraft, but is not considered applicable with this objective due to its unique situation as a private residential facility. Table 8-13 identifies that 25 percent of Level I airports and 50 percent of Level II airports meet the hangar/covered storage objective.

Current hangar facilities imply that the following airports should provide additional covered storage at their airports within the planning period:

- Marana Northwest Regional
- Pinal Airpark
- Ryan Airfield
- Ajo Municipal
- Benson Municipal
- Sells

Based on forecast based aircraft, hangar deficiencies will naturally grow as years pass. Based aircraft projections for 2005, 2010, 2020, and 2030 signal the need to construct more hangars. Table 8-3 reflects hangar needs in upcoming years. The following indicates hangar projects identified in master plans or the CIP:

- Ajo Municipal: Install a 4,800-square-foot T-hangar facility (Intermediate Term)
- Benson Municipal: Construct 10 T-hangar units (Short Term)
- Marana Northwest Regional: Construct 40 T-hangar positions (Short Term)

Apron

Facility and service objectives established as part of the RASP indicate that Level I and Level II airports should provide an aircraft parking apron or ramp area for those based aircraft not assigned to covered storage. In addition to ramp area to accommodate based aircraft, all RASP airports should provide paved apron/ramp areas to accommodate the needs of visiting or transient aircraft. For the Level I airports, ramp area to accommodate 25 percent of the based aircraft and 50 percent of transient aircraft should be available, and for the Level II airports, ramp to accommodate 50 percent of the base aircraft and 25 percent of transient should be provided. Typical planning ratios call for a standard of 350 square yards for each aircraft parked on a ramp. This allows for aircraft maneuvering and taxiing within the ramp area.

Each airport's ramp/apron needs for accommodating based aircraft was determined using projections of based aircraft presented in Chapter Five of the RASP. Forecasts of total annual general aviation operations for each airport, also presented in Chapter Five, were used to identify each airport's needs for transient ramp area. To determine the transient ramp requirement at each Study airport, the following methodology was employed:

- Determine total annual itinerant operations for each airport; use total annual general aviation operations as projected in Chapter Five and each airport's percent of itinerant versus local operations as derived from FAA Form 5010.
- Multiply total annual itinerant operations by 50 percent to account for arrivals, divide by 12 (12 months in a year), then divide by 30 (average number of days in a month). Reduce this number by 20 percent to account for transient aircraft that do not require parking.
- The result is the number of transient parking spaces that should be provided; multiply by 350 to identify the number of square yards of ramp area needed.

The resultant aircraft ramp/apron needs are shown in the **Table 8-14**.

Table 8-14
APRON SPACE OBJECTIVE
(In Square Yards)

Level	Airport	Current Supply	Objective Apron Size (square yards) 2005	2010	2020	2030
Level I	Tucson International	57,400	65,800	66,850	69,650	72,800
	Ryan Airfield	44,100	47,075	49,875	55,650	61,775
	Marana Northwest Regional	25,975	29,660	31,850	36,575	42,700
	Pinal Airpark	5,400	5,400	5,800	5,800	6,100
Level II	Ajo Municipal	1,230	1,580	1,750	2,450	3,000
	Benson Municipal	875	3,350	5,450	10,000	14,525
	La Cholla Airpark	NA	NA	NA	NA	NA
	Sells	350	700	700	1,050	1,050

The following airports should provide more apron space in order to properly serve itinerant and local traffic throughout the planning period:

- Marana Northwest Regional
- Benson Municipal
- Sells

According to recent planning documents, the following apron expansion projects have been identified:

- Ajo Municipal: Expand apron 9,700 square yards (Long Term)
- Benson Municipal: Expand apron 15,000 square yards (Short Term)
- Marana Northwest Regional: Construct 102,000 square yards of an aircraft parking ramp (Intermediate Term)
- Tucson International: Terminal apron reconstruction (Short Term)

Terminal/Administration

Terminal/administration building needs at an airport directly relate to an airport's organization and efficiency as a business. Level I airports should have terminal/administration buildings at least 1,500 square feet in size. Level II airports should have terminal/administration buildings at least 650 square feet in size. Ryan Airfield, Ajo Municipal, and La Cholla Airpark each have terminal/administrative buildings smaller than the identified objective for their respective levels; Benson Municipal and Sells do not presently have a terminal/administrative building. Tucson International, Marana Northwest Regional, and Pinal Airpark each meet the Level I objective for terminal/administration building. La Cholla Airpark is not applicable for this landside facility objective. Tables 8-12 and 8-13 break down individual airport and System compliance for this facility objective.

The following airports should improve current terminal/administration facilities or provide new facilities to meet the RASP objective:

- Ryan Airfield
- Ajo Municipal
- Benson Municipal
- Sells

The following terminal expansion projects have been identified in recent planning documents that support RASP terminal objectives:

- Ajo Municipal: Construct a 150-square-foot terminal building (Intermediate Term)
- Benson Municipal: Construct a 1,350-square-foot terminal building (Short Term)
- Ryan Airfield: Terminal building construction (Intermediate Term)

Operations/Maintenance Hangar

To provide pilots with reasonable access to maintenance facilities throughout the System, the RASP identifies that Level I airports should have an on-site operations/maintenance hangar. Table 8-12 shows that each Level I airport does have an existing maintenance hangar, making the System 100 percent compliant with this objective. (See Table-8-13.) It is not necessary for Level II airports to meet this landside objective, but Ajo Municipal does provide aircraft maintenance in a hangared area and Benson Municipal has identified the need for a maintenance hangar in its master plan.

Auto Parking

In order to ensure adequate facilities for airport users, the RASP established auto parking objectives for Level I and Level II airports. Level I airports should provide automobile parking spaces equal to 100 percent of their based aircraft. Currently, only Tucson International and Pinal Airpark meet this objective. Ryan Airfield is 20 auto parking spaces short of this objective, and Marana Northwest Regional is 128 parking spaces short of the objective. Level II airports should provide automobile parking spaces for a number equal to 75 percent of their based aircraft. La Cholla Airpark is again listed not applicable for this objective because of its unique status. The remaining Level II airports each comply with this objective.

Paved, marked parking has been identified as acceptable parking at Level I and Level II airports; unmarked dirt parking spaces are not considered in the RASP. Parking improvements should be considered at the following airports in order for the System to achieve 100 percent auto parking compliance throughout the planning period:

- Marana Northwest Regional
- Ryan Airfield
- Benson Municipal

Similar to hangar/aircraft storage objectives, note that the number of automobile parking spaces needed to meet this objective will continue to grow with forecasted based aircraft. Table 8-4 analyzes long-term auto parking needs.

The following automobile parking projects were identified in earlier planning documents:

- Ajo Municipal: Construct 225 square yards of auto parking (Intermediate Term)
- Benson Municipal: Expand auto parking area by 1,800 square yards (Intermediate Term)
- Marana Northwest Regional: Construct 3,500 square yards of auto parking (Short Term)

Current projects are underway or in the planning process that will bring airports closer to their landside facility objectives. The following projects have been identified from existing master plans or ADOT's five-year transportation facilities construction program that coincide with RASP compliance:

- Ryan Airfield: Terminal building expansion
- Marana Northwest Regional: 3,500 square yards of automobile parking, 102,000 square foot apron expansion
- Ajo Municipal: T-hangar construction, Apron expansion, 150-square-foot terminal construction
- Benson Municipal: Construction of 40 T-hangar units, 1,800-square-yard auto parking expansion, 1,650-square-foot terminal building

Exhibit 8-5 summarizes Level I and Level II landside facility compliance.

Services

Services provided at airports throughout the System help to meet the needs of local aircraft owners and transient users at each airport. The eight RASP service objectives include the following: Fixed Base Operator (FBO), maintenance, fuel, terminal/pilot lounge, ground transportation services, security, utilities, and food. **Table 8-15** looks at individual airport compliance for each objective. **Table 8-16** summarizes the System's compliance with each objective.

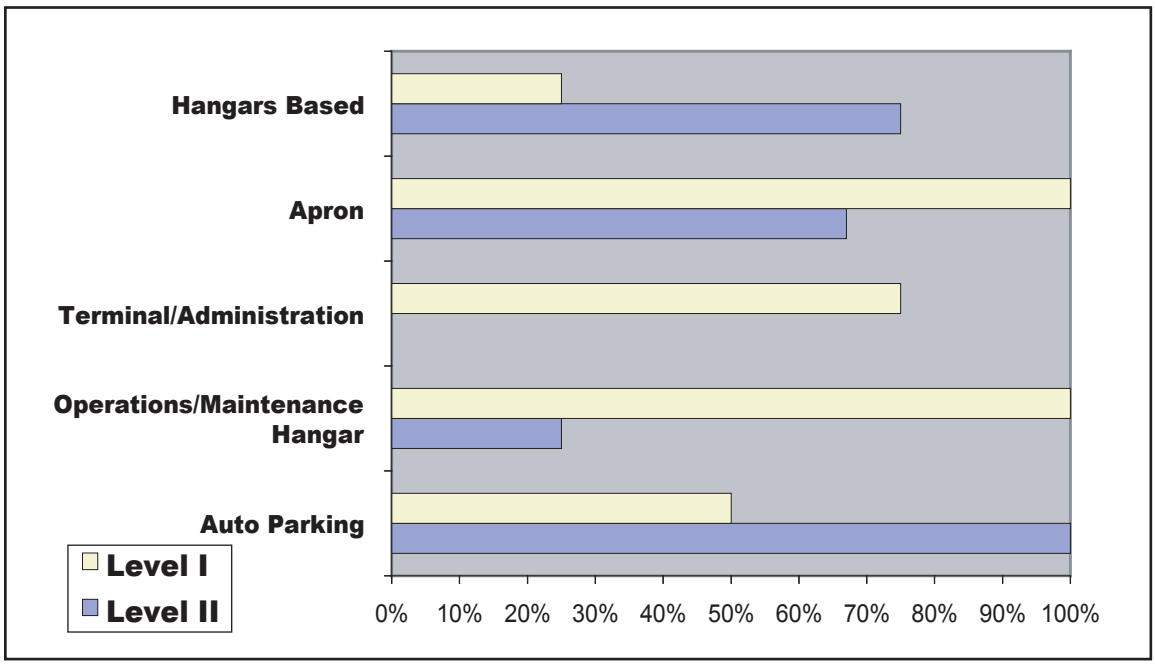
Fixed Based Operators

Fixed based operators (FBOs) are on-airport businesses that provide aviation services to pilots, aircraft owners, and airport owners. FBOs often manage fueling stations, run maintenance operations, provide charter or flight training, supervise airport operations, and sell products to consumers. Level I airports

should have a full-service FBO in order to comply with this service objective. Table 8-16 shows that 100 percent of Level I airports now satisfy this objective. Level II airports should have a limited-service FBO. Ajo Municipal is the only Level II airport with an FBO. Although Benson Municipal is in the process of acquiring one, the airport is currently not compliant with this objective. Therefore, the following airports should have a limited service FBO:

- Benson Municipal
- Sells
- La Cholla Airpark

Exhibit 8-5
LEVEL I / LEVEL II
LANDSIDE FACILITY COMPLIANCE



Maintenance

Level I airports should also have full-service, on-site maintenance available in a designated hangar. Each Level I airport does have an existing maintenance hangar with full-time staff; thus, all Level I airports meet this objective. Level II airports are not required to have maintenance or maintenance hangars. However, among the Level II airports, Ajo Municipal has a working maintenance hangar, and Benson Municipal is negotiating with several potential FBOs to provide maintenance. Table 8-15 shows all Level I airports as compliant, and illustrates that the RASP does not set a maintenance objective for Level II airports.

Table 8-15
SERVICES ANALYSIS

PERFORMANCE MEASURE	Level I				Level II			
	Tucson International	Ryan Airfield	Marana North-west Regional	Pinal Airpark	Benson Municipal	Ajo Municipal	Sells	La Cholla Airpark
Services								
Benchmarks								
FBO								
Maintenance							-	-
Fuel								
Terminal/Pilot Lounge								
Ground Transportation Services					-	-	-	-
Security								
Utilities								
Food								

Noncompliant
Compliant
Planning in Progress
NA Not Applicable
- Not Required

Table 8-16
SERVICES SUMMARY

PERFORMANCE MEASURE	Current Compliance		
	Level I	Level II	System
Landside Facilities			
Benchmarks			
FBO	100%	25%	63%
Maintenance	100%	25%	63%
Fuel	75%	25%	50%
Terminal/Pilot Lounge	75%	25%	38%
Ground Transportation Services	50%	-	50%
Security	75%	50%	50%
Utilities	100%	50%	63%
Food	100%	0%	50%

Fuel

Fuel sales generate revenue and draw aviators to airports. In order for Level I airports to attract a diverse operating fleet, including jet traffic, they should provide Jet A and 100LL fuel. Ryan Airfield does not provide Jet A fuel at this time; all other Level I airports offer Jet A and 100LL. The objective for Level II airports is to provide 100LL fuel. La Cholla Airpark is currently the only Level II airport that provides fuel, and it is for sale only to airpark members or those needing emergency fueling. Table 8-16 reflects System compliance in meeting the fuel objective; 75 percent of Level I airports meet this objective, and 25 percent of Level II airports meet the fuel objective. The following airports should provide fuel:

- Ryan Airfield
- Ajo Municipal
- Benson Municipal
- Sells

Several master plan projects have identified the need for fuel. The following airports report the need for fuel in a recent master plan:

- Ajo Municipal: Construct a 12,000-gallon fuel storage facility (Long Term)
- Benson Municipal: Construct fuel storage (Short Term)
- Ryan Airfield: Install 12,000 gallons of Jet A fuel storage (Intermediate Term)

Terminal/Pilot Lounge

The RASP service objectives state that all Level I airports should have a phone, restrooms, and a flight-planning lounge available. Pinal Airpark is the only Level I airport not meeting this objective; there is no pilot lounge. Level II airports should have a phone and restrooms. Ajo Municipal does not have restroom facilities or a telephone; Benson Municipal has a phone, but no restrooms; and Sells does not have a phone or restroom at this time. Table 8-15 shows that La Cholla Airpark is the only Level II facility to meet the terminal/pilot lounge objective. According to RASP service objectives, the following airports should provide terminal/pilot services:

- Pinal Airpark
- Ajo Municipal
- Benson Municipal
- Sells

Ground Transportation Services

The ground transportation service objective for Level I airports is to have on-site rental car services available. Tucson International and Marana Northwest Regional each have on-site rental car facilities. Although it is possible to arrange for rental car services at Ryan Airfield and for Enterprise Rent-a-Car to deliver a rental vehicle if needed at Pinal Airpark, neither airport currently has on-site rental car services; thus, Ryan Airfield and Pinal Airpark do not presently meet this objective. It is not a RASP objective for Level II airports to have on-site rental car services. The following airports should offer on-site rental car services:

- Ryan Airfield
- Pinal Airpark

Security

Security issues are becoming increasingly important in today's changing aviation environment. New Federal and State regulations are expected to be adopted that will change the requirements that both Level I and Level II airports will need to meet in regard to security. Objectives for Level I airports at this time

are limited to fencing, controlled access, night guard, and terminal/hangar security lighting. Level II airports should have perimeter fencing. Seventy-five (75) percent of Level I airports meet this objective, and Benson Municipal and Ajo Municipal both have perimeter fencing. Marana Northwest Regional does not have controlled access, and Sells and La Cholla Airpark lack full perimeter fencing. La Cholla's situation as a private residential airpark makes it difficult to fence the runway area, but the facility should still try to meet RASP-related security objectives. As a result, 75 percent of the System meets security objectives. (See Table 8-16.)

Airports listed below should increase security measures at their airports:

- Marana Northwest Regional
- Sells
- La Cholla Airpark

Security projects related to RASP objectives are listed below:

- Marana Northwest Regional: Controlled access gates (Short Term)

Utilities

Utilities, including water, sewer, and electric, should be provided at Level I and Level II airports. At this time, 100 percent of the Level I airports meet this objective and 50 percent of Level II airports have each utility available. Ajo Municipal and Sells do not have access to water or sewage utilities on-airport and Sells has no electricity. The following Level II airports should acquire the suggested utilities:

- Ajo Municipal
- Sells

The following projects have been recognized in a master plan document to provide utilities at the airport:

- Ajo Municipal: Construct a potable water supply/distribution system (Short Term), Construct airport sanitary septic system (Short Term)

Food

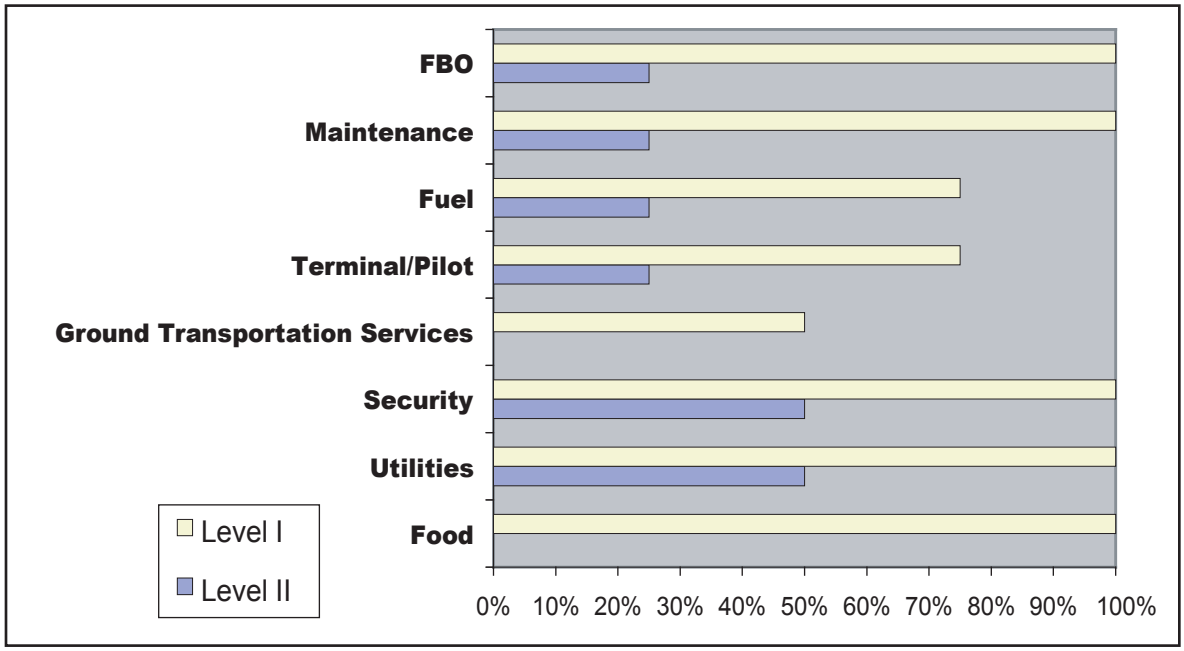
Each Level I airport meets the final service objective by providing full-service food facilities. Level II airports are each deficient in meeting their objective to provide vending machines on-site. Table 8-16 shows that System compliance for the food objectives are 50 percent, systemwide. These Level II airports should provide vending services at their airport:

- Ajo Municipal
- Benson Municipal
- La Cholla Airpark
- Sells

Projects currently underway or in the planning process will ultimately change compliance throughout the System, as it relates to RASP service objectives. Master plans and ADOT's five-year transportation facilities construction program provide a series of service-related investments being considered at this time. **Exhibit 8-6** summarizes RASP service objective compliance without accounting for the following projects:

- Ajo Municipal: Potable water supply, septic system installation, 100LL fuel tank installation
- Benson Municipal: Limited-service FBO acquisition, 100LL fuel tank installation, restroom facilities, vending machines
- Marana Northwest Regional: Controlled access gates
- Ryan Airfield: Jet A fuel installation

Exhibit 8-6
LEVEL I / LEVEL II
SERVICES COMPLIANCE



This chapter of the RASP identified those actions that are required to enable the Regional Aviation System to meet the target compliance objectives established for each System performance measure and its respective benchmarks. In addition, each airport in Level I and Level II has been reviewed to determine what projects should be considered to meet various facility and service objectives that are part of the RASP. The System recommendations suggested in this chapter provide the basis for the final chapter of the PAG RASP. The final element of the RASP, implementation, documents and gives priorities to actions needed to enable the Regional Aviation System to meet the air transportation and economic needs of the Study Area.